

On the 19th a large depression appeared from the west, in the latitude of Isla Mocha. On the 20th, foul weather set in over the south, with heavy winds and rains. On the island of Huao the mean wind velocity reached 1,700 m. p. m. (63 m. p. h.). On the 21st the rains extended into the Central Zone, reaching northward as far as Coquimbo Province. Rainfall of 47 mm. was registered at Valdivia, 26 mm. at Talca, and 15 mm. at Coquimbo. Between the 22d and 24th the depression

weakened as the result of convergence of strong winds, in harmony with the laws of Guilbert.

From the 25th to the 31st the weather remained unstable, with frequent alternations of high and low pressure in the south. The most important depression of the period occurred during the 29th to 31st. It rained from Aconcagua Province to Valdivia, precipitation in the south ranging from 30 to 40 mm.

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SOLAR OBSERVATIONS

SOLAR AND SKY RADIATION MEASUREMENTS DURING JUNE, 1926

By HERBERT H. KIMBALL, Solar Radiation Investigations

For a description of instruments and exposures and an account of the method of obtaining and reducing the measurements, the reader is referred to the REVIEW for January, 1924, 52: 42, January, 1925, 53: 29, and July, 1925, 53: 318.

From Table 1, it is seen that solar radiation intensities averaged above the normal for June at all three stations.

Table 2 shows a decided excess in the amount of radiation received on a horizontal surface from the sun and sky at Madison, a slight excess at Lincoln, and a pronounced deficiency at Washington.

Skylight polarization measurements made on four days at Washington give a mean of 54 per cent, with a maximum of 56 per cent on the 28th. Measurements made on six days at Madison give a mean of 60 per cent, with a maximum of 64 per cent on the 8th. These are close to the corresponding averages for June for the respective stations.

TABLE 1.—Solar radiation intensities during June, 1926

[Gram-calories per minute per square centimeter of normal surface]

WASHINGTON, D. C.

Date	Sun's zenith distance																					
	8 a.m.		78.7°		75.7°		70.7°		60.0°		Local mean solar time				Wash-ington							
	75th mer. time		Air mass				Local mean solar time				Wash-ington				Madison							
	e.	5.0	4.0	3.0	2.0	*1.0	2.0	3.0	4.0	5.0	e.	cal.	cal.	cal.	cal.	cal.	cal.	cal.				
June 2	mm.	7.57									mm.	0.71	0.98	1.23	1.43				4.95			
8	10.97		0.41	0.71							7.29	0.80	0.05	1.12	1.37				7.29			
9	10.59					1.14					9.83				1.43	1.18	1.00	0.89	8.81			
10	8.81	0.59	0.81	1.03	1.32						8.48					1.08	0.81		5.56			
11	7.29					1.16					8.18					1.11	0.93	0.79	6.02			
17	8.48			0.92		1.24					14.10								16.79			
21	9.14		0.77	0.90	1.05	1.20					9.14	0.78	0.94	1.19	1.36				7.87			
25	11.81		0.72	0.90	1.17						23	7.04		0.93	1.19	1.28	1.10	0.92		6.50		
28	9.14	0.80	0.96	1.16	1.45	1.01					26	8.48	0.95	1.02	1.27				8.48			
29	12.24					1.22					30					0.81	0.98	1.21	1.39	1.12	0.93	0.84
30	13.61					1.05					Means	+0.04	+0.05	+0.11	+0.04	+0.03	+0.03	+0.07				
Means			0.72	0.79	0.99	1.22 (1.01)					Departures	+0.10	+0.07	+0.10	+0.01	+0.09						

* Extrapolated.

TABLE 1.—Solar radiation intensities during June, 1926—Contd.
 MADISON, WIS.

Date	Sun's zenith distance																		
	8 a.m.		78.7°		75.7°		70.7°		60.0°		Air mass				solar time				
	75th mer. time		A. M.				P. M.				solar time				solar time				
	e.	5.0	4.0	3.0	2.0	*1.0	2.0	3.0	4.0	5.0	e.	cal.	cal.	cal.	cal.	cal.	cal.	cal.	
June 1	mm.	7.57									7.29	0.80	0.05	1.12	1.37				8.81
3		6.76									9.83								8.18
4		6.76									8.48								6.50
5		7.04				0.88	1.00				8.18	0.93	1.05	1.19					6.76
8		8.18				1.05					9.14								8.18
9		9.47									15	7.29							8.81
19		6.27									23	6.27							8.18
23		9.14									26	7.57							7.29
26		7.57				0.86	0.97	1.15			30	9.14							9.14
Means											Means	0.89	1.01	1.16	1.38				9.47
Departures											Departures	+0.01	+0.04	+0.06	+0.06				7.29

LINCOLN, NEB.

June 1	6.27		0.71	0.98	1.23	1.43												4.95		
2	7.29		0.80	0.05	1.12	1.37												7.29		
4	9.83										7.29	0.83						8.81		
6	8.48										8.48	0.94						5.56		
7	8.18										8.18	0.94						6.02		
16	14.10										14.10							16.79		
17	9.14					1.07	1.26				9.14	0.78	0.94	1.19	1.36				7.87	
23	9.14					1.24					23	7.04		0.93	1.19	1.28	1.10	0.92		6.50
26	7.04					1.22					26	8.48	0.95	1.02	1.27				8.48	
27	8.48					1.22					Means	0.81	0.98	1.21	1.39	1.12	0.93	0.84		
Means											Departures	+0.04	+0.05	+0.11	+0.04	+0.03	+0.03	+0.07		

TABLE 2.—Solar and sky radiation received on a horizontal surface
 [Gram-calories per square centimeter of horizontal surface]

Week beginning	Average daily radiation					Average daily departure from normal					
	Washington	Madison	Lincoln	Chicago	New York	Washington		Madison		Lincoln	
						cal.	cal.	cal.	cal.	cal.	cal.
1926											
June 4	393	638	630	463	358	-101	+141	+90			
11	427	412	480	314	369	-67	-98	-73			
18	425	585	530	508	377	-69	+62	-43			
25	575	538	639	468	460	+84	+4	+52			
Excess since first of year on July 1						+1,694	+3,521	+756			